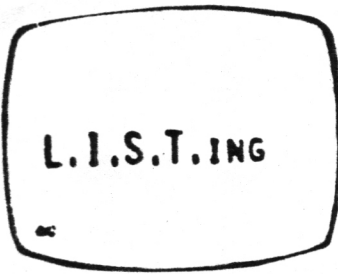
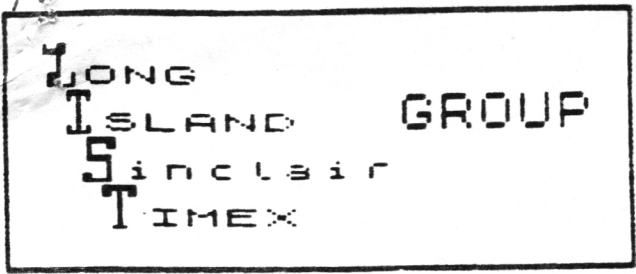


231786



March 1986

Issue Price \$1.50

MEETING NOTES - FEBRUARY 9, 1986

The February LIST meeting was held at Huntington public library on February 9th, 1986. The meeting was called order at 2:20PM by Chuck Russell. The treasurer reported \$833. in the treasury and 85 paid up members. Two more members paid dues at the meeting. Membership is expected to pass 100 again as soon as the February issue is missed.

Chuck R. emphasized the need for meetings to start on time and that a telephone chain would be necessary for inclement weather dates (only 18 members attended this meeting). For members with MODEMS, an announcement will be made on the Zebra BBS.

NEXT MEETINGS!

The next two meetings will continue Chuck's special "theme" concept. They will be:

Table with 2 columns: Date, Theme. Row 1: March 16th - @ 2PM, Modems & Telecommunications. Bring your MODEM. Zebra has promised to set up a BBS in the meeting room. They also have "naked" (no documentation) but legal copies of MTERM which they'll sell for \$1 - meeting pickup only.

Table with 2 columns: Date, Theme. Row 1: April 13th - 2PM, Hardware Breakers (e.g., Interface III)

DISCUSSIONS

A BBS for LIST was proposed. Cost is about \$100 for installation, plus \$12/mo for the line. No action was taken. BBS= (Bulletin Board Service). H. Werthauer, our most experienced user, has volunteered to help out new MODEM users. If you need help call Herbert either by voice (get his number at the meeting) or on compuserve or the Zebra BBS.

On the subject of MODEMS and software, Zebra's Stewart N. noted that there are no complete (with documentation) copies of MTERM I or II currently available. They are negotiating with Microsystems for the rights to publish the software. In the meantime, he has some tapes only (see the note above). Also, Jeff S. is writing Z-term 64, a 64-column terminal program for people who have OS-64. Zebra promises to sell this at LIST meetings for less than 1/2 the regular retail price of Z-Term (\$30) when it is ready. No one seemed to know of any good BASIC software which would drive the 2050 MODEM. Mention was made of Byte-Back and Spectrum programs (like Specterm), but availability and suitability are unknown.

Zebra also showed an RS 232 adapter board which mounts above the 8251 on the 2050 modem board. This board has standard RS 232 driver and negative power supply converter on board. Time Designs magazine will be publishing the schematic and details as a construction project.

P. Donnelly noted that these are two upcoming events which should be of interest to TIMEX/SINCLAIR users - These are:

Trenton Computer Festival - April 19th and 20th - Trenton State College, N.J. + Midwest Computer Fair - May 2 & 3 in Cincinnati.

Cedric B. mentioned that the Sharp EL-506P calculator, available at Service Merchandise for about \$15.00, is a BEST BUY for serious programmers. In addition to scientific functions, it has number base conversion capabilities (e.g., hex-dec-octal-binary). Cedric also showed us a VHS cassette box, which he had modified to hold the Zebra twister board. This made for a very professional looking interface. He recommends using an Exacto #11 blade to cut these plastic cases, rather than heat.

Zebra announced their new FDD (floppy disk drive). The new design has dual drives, power supply, 64K RAM and CP/M adaptability all in one case. It will be priced near the price of the original component system (when supplied with one drive) and CP/M should cost about \$50. more. In fact, the FDD unit is virtually a stand alone CP/m computer, needing only keyboard and monitor to be independent. You'll still need a "personality" module and Spectrum compatibility is not yet 100%. Zebra is also working on a "freeze" feature which will allow automatic transfer of tape software to disk.

PRESENTATION

Bob Gilder gave an outstanding introduction to printers. He was assisted by Harvey Rait., Bob Malloy and Chuck Russell, all of whom brought their own printers (EPSON, OLIVETTI, etc) to supplement his Silver Reed and Prowriter. All these printers, and a number of drivers, were demoed for members, and Bob discussed the basics one needs to know to get a printer working. See a copy of Bob's handouts, inside.

Box 438 Centerport, N.Y. 11721-0438

MARCH 1986

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LIST GROUP

PRESENTATION

Bob Gilder gave an outstanding introduction to printers.

Bob used the software shown in this issue (individual routines will be repeated in upcoming issues) of LIST, and the Oliger driver. Bob likes J.O's printer driver because it "hides" in the 256 byte printer buffer and then doesn't interfere with other system operations. (STREAM #3)

The essence of Bob's talk was "experiment", he was reasonably happy with Tasword and M-script, but knew there was more his \$100 Prowriter (C.I.TOH) and Silver Reed could do. When he discovered CHR\$ 27 (Escape), it opened up a whole new area of control codes for special effects and graphics. Your printer may use different codes. You can only find out by reading the manual (if all else fails) and experimenting. Bob's programs should give you a good start.

Of course, don't believe everything you see in the manual. Harvey R's Olivetti manual said to press LF and FF at the same time to run a self test. This didn't work until he realized he had to push down both buttons and then turn on the printer.

If the control codes in Bob's article appear confusing, consider Zebra's new laser printer. It uses a whole 'nother' set of escape codes, on top of the standard ones. See Zebras' new flyer for samples of what a LASER printer (200-400 dots per inch) can do.

Bob's presentation was well received and appreciated by all the members (except a few who occasionally forgot their manners) especially as he had lost a system just to get his material ready. A short on the expansion connector knocked out his 2068 and interface just before the meeting. Bob used his backup 2068 and an older Oliger Eprom to get things running again. Thanks Bob from all of us.

Finally, one more note on MODEM's: Bob G. found one of the two which he bought (bare board - untested) didn't work. He traced the problem down to an internal short in the cable between the edge connector board and the mother board. This makes the success ratio 8 out of 10, based on reports we've received. Both defects were minor.

SPECIAL NOTES

1. Please read your newsletter each month. Important notes about subscriptions, dues and library tape status have been included in almost every issue. We assume that if you get the newsletter, you read, understand and acknowledge the material therein.

2. Dues/subscription - These run concurrently. In fact, over 90% of your dues goes to publishing your copy of LISTing. Another % goes to paying for the exchange copies. The remainder is used for postage, paper, photocopying and other office expenses and to pay services at meeting sites (about \$10-15 per meeting). See the policy statement. Unless you specifically requested non-standard membership, and were granted same, your membership year is Feb. through Jan. We normally do not make exceptions without sufficient reason. As an example, if you sent in your \$15. in July, you probably received the Feb., Mar., Apr., May and June issues in a special package a short while later. This brings you up to date for the current year.

Not only does this policy make the member lists easier to administer (it is a volunteer job), but it also means that all members are on the same footing by year end. 90% of the questions we are asked by inquirers and new members have been answered in the last 12 issues.

3. Back Issues - Jeff Street has received the back issue masters and will be able to generate copies. We hope to be able to keep the costs down to 10¢/2 sides, or about \$1.25/issue, plus postage (39¢). Contact Jeff for more information.

4. Library tapes (TS 2068/Spectrum) - You do not need tapes #1. X and 2. X. The X is the version #. Only the Beta test group receives a version earlier than the final "correct" one sent out to all members. That is, if you received tape 1.6 and 1.7, you received the final version. For all practical purposes there was no 1.1, 1.2, etc. These numbers were only used internally in making masters and test copies. (The only difference between 1.6 and 1.7 was the order of the programs and the removal of a commercial program).

The reason you do not need #1X and #2X is that all those programs will be on #3, or 4, or 5. In fact, if you have 3 and 4, you have something like 90% of the solid material from 1 and 2. 1 and 2 were developed in 1984 for the members current at that time.

Tape # 4. X is in circulation now. By the time you read this, everyone (except the very newest members) should have received it. If you have not, let us know and we will begin a trace. Remember, those who return the tape slowly will be placed in "slow" group next time. This includes any group which "loses" the time dating form which accompanies your tapes.

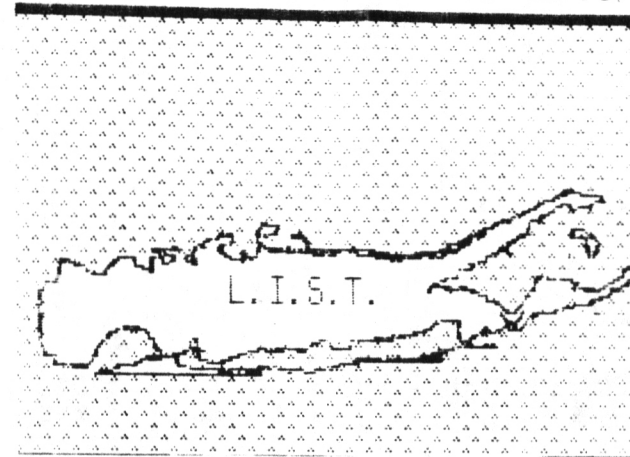
Finally, do be extra careful with the "blank" tape, make sure you don't overwrite another members contributions.

Oh yes! remember that some programs are for Spectrum. If it doesn't run on a 2068, try an emulator device.

5. Library tapes (TS1000) - TS 1000 (only) members have done poorly, as a group, in circulating their tape. Again, PLEASE re-read the procedure, as described in back issues. If you are a TS 1000 only member and have still not received the tape, you must contact us (via postcard) in order to receive the tape and disk (Aerco), at this point.

The same goes for TS 2068 members who wish to obtain the TS 1000 tape. No effort has been made to circulate the 1000 tape to 2068's, as there were no requests to do so prior to Jan. 5, 1986 (when we received our first from Martin H.). If you wish to receive the TS 1000 tape, you must specifically request it. Remember, you are responsible for quick one-way postage, adding a program, and packaging replacement, if necessary. It also costs LIST to mail the tape out in the first place. If you do not have a serious need for the tape, don't waste yours and other peoples time and money by asking for it.

Long Island Sinclair Timex Group



LIST GROUP

2 YEARS OLD AND GROWING STRONG

At last count, LIST had 119 active members. They were from 25 states, 4 provinces and Mexico. 60 of our members, or slightly over 50%, are New Yorkers. We've sent literally hundreds of sampler issues of LISTing to inquirers, and exchange newsletters with over 25 other groups/publications. Our newsletter, LISTing, is the largest, regularly (on-time), published TSUG newsletter in the country.

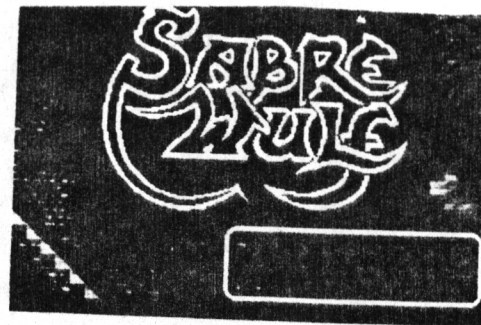
LIST has been mentioned in: Computer Shopper, Byte, Computer Living, N.Y., ZX Computing, Info-World, N.Y. Times, Computer Trader and virtually all TS Specific publications.

LIST is the only group with a 4 volume circulating "private domain" library of member submitted programs (nearly 4 hours of tape). Volume 5 is in production.

LIST members include professional software creators, newsletter editors (besides our own), major vendors of TS material, sophisticated hackers, scientists, educators, Tyros, friendly users and novices, (lots of novices). LIST members own or use other computers as well as TS machines. These include: Interact, Apple, IBM, Adam, Aquarius, Amiga, Spertivideo, Atari and yes, even Commodore.

LIST has an SIG on the Zebra BBS and LIST members are some of the most active on the national boards.

Most LIST members belong to more than one user group.



TAPE RECORDS

Here is all you wanted to know about saving to tape but didn't know where to look. Except for minor differences, like speed, much of it applies to the micro drive and some disc files. One important function is not immediately evident: the ability to SAVE code from one location--then LOAD it back to another.

INPUT MONITORING

For all tape playback operations, a message is displayed on the screen every time a leader is read. This happens during the gap between the leader and the record. If the leader matches the data type and name specified, the record is read and acted upon. If not, the message remains and reading continues. Messages accumulate in a list until a match is found or no more data is left to read.

LOAD "BFUZUJ" makes an index for a tape which has no program record named BFUZUJ.

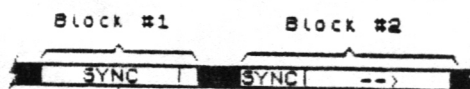
TAPE HEADER FORMATS

LINE	TYPE	DESCRIPTION
1	All	Header identifier (value=0)
2	All	Record type (value=0-3)
3-12	All	Record name
13,14	0	Length of prog & var (E LINE)-(PROG)
	1,2	Length field from data structure
	3	Specified length
15,16	0	Autostart line no. or 0080h (LSB/MSB)
	1,2	Array I.D. code
	3	Specified address
17,18	0	Length of program (VAR)-(PROG)
	1-3	N/A (value=0)
19	All	Checksum (XOR bytes)

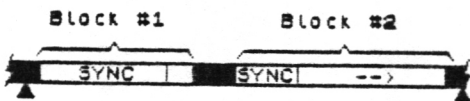
RECORD TYPES

- 0 Program-and-variables
- 1 Numeric array
- 2 String array
- 3 Binary code

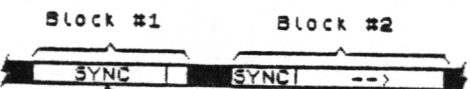
TAPE FORMAT



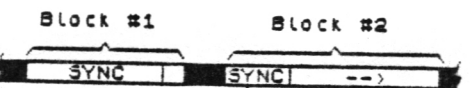
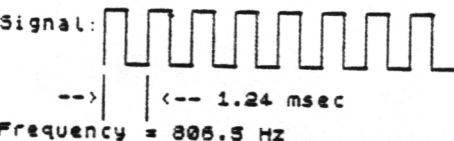
The tape recording consists of two blocks of data separated by a blank gap. (.835 sec) Each block begins with synchronizing cycles. These cycles are used by the 2050 to compensate for variation in tape speed from one recorder to another, or due to other causes.



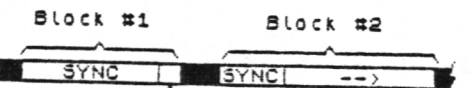
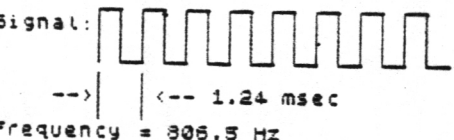
Gap, and optional audio.



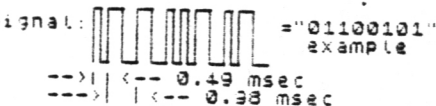
4,032 synchronizing cycles. (five seconds)



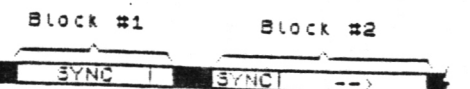
1,612 synchronizing cycles. (two seconds)



Leader. (Tape label.)



Frequency = 2040 Hz for a "0"
1020 Hz for a "1"



Record. The record identifier is a single cycle at 2400 Hz. The rest of the signal is the same type as for the leader. The record ends with a checksum byte. Both checksum bytes have an additional transition to assure a correct read from tape. It takes about five seconds per Kbyte of record.

SAVE INSTRUCTIONS

SAVE "fox"
Saves program and variables.
SAVE "fox" LINE auto
As above but starts running at program line number auto when reloaded. (see leader format)
SAVE "fox" DATA v()
Saves numeric array v.
SAVE "fox" DATA s()
Saves string array s.
SAVE "fox" CODE location, bytes
Saves bytes of binary data starting at location.
SAVE "fox" STRINGS
(equivalent to:
SAVE "fox" CODE 16384,6912)
Saves screen.
(Primary display file)

When SAVING, the record name must be from 1 to 10 characters. It cannot be omitted.

For all other commands, only the first record having matching name and data type will be acted on, with one exception.

If the record name is specified as the null string "", the first encountered record of matching data type, regardless of name, will be acted on. This option will be assumed in subsequent examples, but not shown.

Note that the same record name can be reused once for each data type without interference.

VERIFY INSTRUCTIONS

VERIFY "fox"
Verifies program and variables
VERIFY "fox" DATA v()
Verifies numeric array v.
VERIFY "fox" DATA s()
Verifies string array s.
VERIFY "fox" CODE location, bytes
Verifies bytes of binary data starting at location.
VERIFY "fox" CODE 16384,4288
Verifies as much of SCREEN as possible. The computer alters the lower two lines for reports. Because of the way D-FILE is organized, these bytes are intermixed with those for the bottom eight lines. This is incomplete but quite effective.

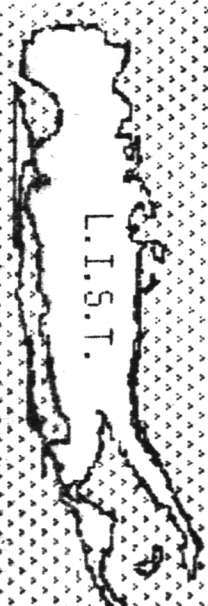
LOAD INSTRUCTIONS

LOAD "fox"
Loads new program and variables from tape, over any that were already present.
LOAD "fox" DATA v()
Loads numeric array v.
LOAD "fox" DATA s()
Loads string array s.
LOAD "fox" CODE location, bytes
Loads at most bytes of binary data starting at location.
LOAD "fox" CODE
Loads back where it came from.
LOAD "fox" SCREENS
Loads from tape to screen, except for the bottom two lines. It is interesting to watch.

MERGE INSTRUCTIONS

MERGE "fox"
Keeps old program and variables, then loads new program and variables from tape. New program lines are inserted or overwrite old program lines. New variables are added, or replace old variables having the same name.

MERGE requires free memory to provide a work space. There is also no prompt to tell you to stop the recorder, other than a change in border pattern. The same is true when LOADING large arrays.



Long Island Sinclair Timex Group

LONG ISLAND
SINCLAIR TIMEX
GROUP
LIBRARY TAPE
4.6

L.I.S.T. GROUP
P. O. BOX 438
CENTERPORT, NEW YORK 11731-0438

DECEMBER 1985

12/5/85 - End of library tape "TURTLE HOP" is incomplete, the end of program runs into leader coming up with a "tape Error". - I G

12/9/85 - Several programs on side B could not be made to RUN. Most of these were of no interest to me, but I would have liked to RUN "MAC". Basic + Bytes appeared to LOAD OK, but all I got was the following, after which the system just froze...
Somebody help, please! C.R.B.

Maybe not all bytes LOAded??

P.S. Duplicate programs waste tape! (GREETING, BIG, etc.)

The "pac blast" 2-line basic program LOADS, but the two BYTES programs don't (not in Spectrum, nor in 2068 mode). One did once (.P) but it RESET the computer! C.R.B.

Is this an incomplete line?

10 PAPER 7 IN: 0 CLS
20 LOAD SCREENS
30 SAVE "mac" LINE 1: SAVE "me"
SCREENS PAUSE 0

"MAC, WHAT'S THAT?"



MAC-PAINT STYLE ART HAS BEEN
PASSED DOWN TO THE HUMBLE
TIMEX 2068

12/18/85 - It would be helpful to have a list of programs on the tape. Didn't have 2 recorders. Had trouble loading programs on 2068. Do not have Spectrum chip. Very discouraging. - Al G.

1/6/86 - "phonedir" would not load (or tape loading error, etc) - R. C.

This is a sample of the "response" sheet sent in by the first group to finish up tape 4.6. Two members of that group did not provide programs. (they will be placed in other groups) To briefly answer your questions/comments.

I.G. Sorry about that. We tried to get a little too much on the tape. Complete version next time.

C.R.B. The 'MAC' program was just a screen and its loader. We include graphics submitted by members just as a diversion on the tape. That one was made using Zebra's Tablet. The bottom "line" is what is left of Zebra's command menu, as Sinclairs Screen # command doesn't properly save the last 2 (command) screen lines.

Pac blast was a compiled version of Pac.BASIC using Elast compiler. The original was made tape-to-tape, so perhaps the level was not high enough on your second generation copy. The program should run on a completely RESET Spectrum (RAND USR 0).

I believe the duplicate Greeting and Big (banner) programs were different versions. Sometimes we discover a 'bug' or create an improvement in a program, which is already on the master. The nature of the cassette storage medium makes it impractical to erase the original version. We are then forced to leave it on the tape.

Al G. - Here's your list (see Stan NAGROD's contribution). We try to publish a list in the newsletter prior to sending out the tape. Try:

LOAD "QUIRKAFLEEG"

Since there is no program of that name, the 2068 will blithely scan all the headers on the tape and print the program names on the screen. Send the output to the printer (#3) or copy the screen every 20 or so lines.

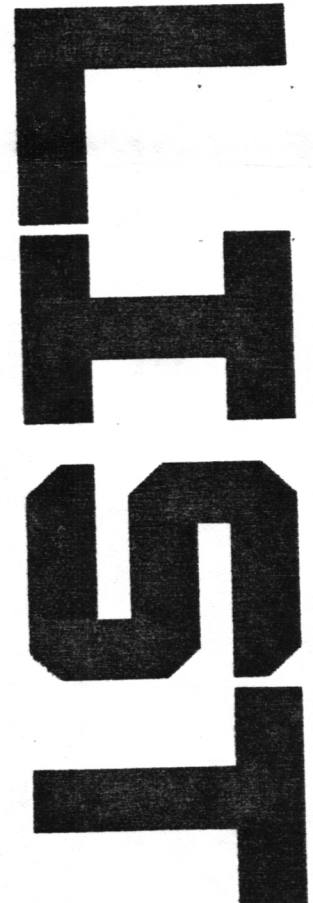
I recommend that everyone have a second recorder. Most name brands have at least one under-\$20 model (on sale) which is ideal for our purposes.

Hope things turn out better with 5.X

R.C. We'll put a new copy on an upcoming tape.

Please continue to send in your questions/ comments on the tapes. We'll do what we can to answer them and improve the system.

LIST LIBRARY TAPE
4.6



Imagine that you want to mail a small gift, a ring or a watch, to a friend in another city. You go to the post office with your tiny package. "Sorry sir, you have to ship it across country in one of our mailing cartons. You see, we like to keep everything uniform and so, all our shipping cartons are the same size--We won't ship any other way." He then gives you a carton big enough to hold 14 elephants plus 13 grand pianos plus 12 drummers drumming plus eleven lords-a-leaping...etc.

Fantastic scenario? Could never happen? Wrong! It happens every time you SAVE or LOAD data in Tom Woods' Pro/file program. You see his "shipping carton" is D\$, a single string 28000 bytes long, that acts as a container for your data. Even if you only have 50 bytes of data in that string, you are forced to SAVE and LOAD all 28000 bytes, most of which is empty space. It takes a long time for the 2808 to process 28 Kilobytes.

The solution to your mailing problem would be to hire a messenger to deliver a package that is only as big as the stuff you are sending. On the LIST/DATABASE, a program that I have adapted from Pro/file, that "messenger" is XFER.

XFER is a routine written by me and Martin Brennan. In essence, it looks at D\$, slices off the empty spaces and just delivers the data, thus ending one of Pro/file's biggest headaches.

Data can be loaded into the program by way of XFER, only if it has previously been saved by the XFER routine. XFER uses the keyword "OUT" to save data. Data saved this way can be loaded into the empty database using the keyword "IN".

Some of you may not be familiar with how to use Pro/file. So here I think it might be wise to tell you how to SAVE and LOAD the regular way (without the aid of XFER). To SAVE: When you are at the menu, type in the letters S,A,U, and E. To LOAD: you must type in the letters L,O,A, and D. Pro/file does not use the keywords for these commands. You do have a choice with the LIST/DATABASE. You may save or load data the XFER way or the regular SAVE/LOAD way of Pro/file.

I have prepared a tape which I am submitting to LIST by way of the blank cassette that was enclosed with LIST TAPE 4. I will also submit a copy at the next meeting (if I get a ride). In either case this program should be in your hands by LIST TAPE 5 or LIST TAPE 6 at the latest.

On this tape are 3 programs. 1. "LIST/DATABASE" (empty). 2. "L/DATA" (data saved the regular way). 3. "SHORT" (same data but saved with XFER). First load the empty data base. (Stop the tape when you see the prompt, DATE?)

Put in the present date (no more than 8 characters). Press ENTER. Now you get, TIME? -. Type in the present time (no more than 4 characters). Press ENTER. You get 3 options: "C" - CREATE a file (USE this only if you want to start from scratch with an empty database). "L" - LOAD a file (USE this only if you are going to load in data that was saved the regular way. L/DATA is such a program). "X" - for XFER (USE this option only if you have XFER data that has been saved with the keyword "OUT"). "SHORT" is an example of this type of data).

I hope that this is enough to start you. Any problems or questions about how to use the DATABASE or Pro/file programs please call me at (212) 427 0179 or write MYLES COHEN, 10 E 95th ST Apt 6, NY, NY 10128

* LIST DATABASE *

A VERSION OF PRO/FILE
© 1984 By THOMAS B. WOODS

Adapted by

MYLES C. COHEN

(212) 427 0179

[Feel free to call me if you have any questions]

LOADING Please wait

LIST/DATABASE 5 JAN 86:1434

Separate MULTI-WORD
command words with the
token "AND"

OPEN: 28000 bytes
FILE: EMPTY
ORDER: 0
FORMAT: ALL

Type "A" to ADD files
"SAVE" or "LOAD" for tape
"AUTO" for AUTOSEARCH
"DEEP" changes PRINT format
"NM" to change FILE name
"RT" to CLEAR file
"OUT" for XFER
"IN" for XFER

SHOWS/EVENTS

Midwest Z X Computerfest - see letter section - May 4 & 5, 1986.

Trenton Computer Festival '86, April 19 & 20 1986, at Trenton State College Recreation Center, Hillwood Lakes, CN 550, Trenton, N.J. 08625 (609) 771-2487

Brooklyn User Group - being started by M. Helfgott. First meeting at Greater N.Y. Savings Bank, 13th Avenue & 53rd Street, in Brooklyn (take Belt to Ft. Hamilton Pkwy) Sunday February 2nd, 1:PM Community Room. Martin will report on the meeting.

00 "List Information"

The following information is provided to assist Members of LIST. After reading this it is hoped that you will easily find those articles you saw but don't remember what Month or Page.

This index is the first attempt at compiling and changes are already planned for the next year.

Please feel free to send any suggestions for improvement to LIST. Also has this index helped you? PRESS "F"

01 List index is set up as follows. There are seven fields. Each one may be selected sorted and listed numerically/alpha. The field titles are:

Equipment name.
Type Article.
Article Name.
Author.
Issue Date.
Page.
Comments.

Each one is further define on the following pages. Press "F"

02 EQUIPMENT TYPE
Is define as the following one or more if applicable may be listed.

1000
1500
2020
2040
2058
Spectrum
QL
ZX81
Printers
Rcdr cassette
Rcdr cassette Micro. PRESS "F"

02A Rcdr Cassette Micro includes: mini-micro/stringy floppy tape recording devices.
Rcdr Disc drives
Interface I
Interface II
Interface III
Twister (2058 to spectrum conversion info.)
Cartridge (includes emulator program roms etc.)
Misc. (includes all other) Modem includes Bulletin board information. Press "F"

03 TYPE ARTICLE
Major Headings: Hdw
Software

Minor Headings: Hints & Tips
Review
Pgmm
Construction

Sub Minor Hdngs: Basic
HC

Note! Hackers comments will be listed under Hints & Tips Press "F"

04 ARTICLE NAME
Where possible will be listed exactly as it appears at the heading of the Article. If the Title is long, the heading may be concluded under "comments". This is one of next years changes. There will be room for two lines each of ARTICLE NAME and COMMENTS.

Press "F"

05 AUTHOR
Self Explanatory

Where possible name will be entered. In cases of missing names if you know Author let us know. If the Article is a review both name of designer and reviewer will be listed.

Press "F"

06 ISSUE DATE

In the case where a dual issue is published, the first month will be listed.

Press "F"

07 PAGE

No explanation required

08 COMMENTS

Misc. information that may apply.

Press "F"

09 Program operation

There are several commands that can be used with this program. Others listed should not be used. Useful commands are listed and there use explained on following pages.

1. Select (S)
2. Forward (F)
3. Back (B)
4. Order (O) (sort)
5. List (L)
6. Print copy (P)
7. Quit (Q)

10 Select (S) will select a string any place on the page or on any one field selected

There are seven fields in this LIST index program.

Press "F"

11 Forward (F) Press to move forward, one record at a time from the "current" record to end of file. The file is ordered according to the first data field, unless otherwise changed with the order command

12 BACK (B) Press to move backward one record at a time, from the current record to the beginning of the file.

Press "F"

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Article Title: MULTIPLE PROGRAM

Author: KEITH SKAFINSKI

Computer: TIMEX SINCLAIR 2068

There are many ways to have more than one program in your TS2068 at a time. There are two ways that I know of which allow you to have multiple programs in memory without additional software. The first is to connect programs together using MERGE which is not all that practical, and the second is to use a single POKE command. In the following article, I will tell you how to use a single POKE command to get multiple programs in memory.

It is very easy to store and recall programs. First load or type in a program and type POKE 26710,100. The listing will disappear. Now merge or type in another program. (When you merge in a program, there will be a delay before the code appears at the bottom of the screen. The length of this delay depends on the length of the program being merged in).

You can keep merging and storing programs until you run out of memory, but for now we will stop here. Right now you should have two programs in memory - one in the "main memory" and one in the "storage memory". I once had eight programs stored in the computer at one time.

When you are finished using the program which is in the "main memory", type DELETE 1,9999 (ENTER). This program will now be erased from memory. Now type POKE 26710,0 and the first program will be called back. If you have more than one program stored, you will notice that the last one to be stored will be the first one to reappear when you type POKE 26710,0.

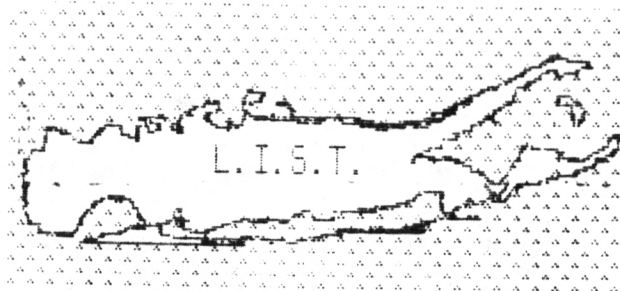
You can save the programs you have in the "storage memory" as well as the program you have in the "main memory" by using SAVE. When you load it back, you can delete the program in the "main memory" and recall the programs from the "storage memory". Of course, the more programs you have stored, the longer it will take to save and load.

If you have programs stored, make sure you use MERGE "???" to load the next program. If you use LOAD "???", the stored programs will get messed up. To erase the program in the "main memory" so you can recall a stored program, type DELETE 1,9999. Do not type NEW.

If you have any questions or comments, feel free to write me. My address is:

7 ATKINSON LANE
CORAM, NY 11727

If you would like a reply, please send a SASE.



LEAVE MY STUFF ALONE! \$X\$0\$

In all of us there is a deep desire to keep our property safe from observation, damage, theft, and plagiarism. It is human (and corporate) nature. As disturbing as it might be, our fondest hopes are doomed to failure! Students of cryptography are well aware that few approaches meet the needs for secrecy. All codes can be broken in time. The code is quite all right if it takes longer than you need to keep the secret.

Computer programs are code. Anything you write is therefore a form of cryptography. How about that? Let's take a case in point. Issue #14 had on Scott's cluttered desk the ubiquitous "10 ON ERR CONTINUE".

Is it breakable? No sweat. Under the conditions assumed it works very well, but suppose we change the conditions? Don't load it as a program. Load it as machine code instead. MDM? You might groan. Well, take it from someone who made a lot of mistakes, including erasing parts of tape records—make a new header. It should specify that machine code is expected, where to load it, and how much. Put it ahead of the old header. When loading, skip the portion of tape for the old header and continue. You will get a tape error message, but the data has most assuredly been loaded. Now you can look at it, change it, and even print it using appropriate utilities.

Why not read the header? It is "protected". I will not bore you with the how and why of this, nor the way around it.

You can say bye-bye to concealment from observation. Unless you can hide the computer from itself, nothing can be hidden. It wouldn't be a computer any more, would it?

For those of you who have damaged your precious and only tape records, there is some hope.

If you have been paying attention, you have learned that you can write tape headers separately. All you need to do is stop the recorder at the one second gap between header and data record.

So far so good...but what kind of header do we write? Assuming that you met it with me, it will show the smart to figure out the others—here is an immediate instruction set which will almost always work for programs.

```
NEW          (Clears program and variables up to RANTOP)
DIM A$(30000) (Pushes E_LINE up to 56710)
POKE 26710,0:POKE 26711,1: (LINE #1)
POKE 26712,48:POKE 26713,60: (LENGTH - 4)
POKE 26714,234: (REM)
POKE 26715,13: (RETURN)
POKE 26716,128: (END OF BASIC FLAG)
POKE 23627,141:POKE 23628,221 (RESET VARS TO 56717)
```

EGAD! This is the world's longest REM statement! There is no limit to the length of a statement, except it is impossible to edit any that create more than 768 characters on the screen. Remember that control characters don't show on the screen and tokens generate more than one character. CHR\$(234) generates "R", "E", "M", and

The REM statement has completely replaced A\$(30000). VARS now points to an empty variable list.

SAVE "Fixit"

This will write the new header, and a very long REM if you let it. We'll settle for just the header. This header expects a program from PROG to VARS-1, and variables from VARS to E_LINE (but there are none). We have established these with our long REM statement and by poking VARS.

This header gives an error when it fails to find CHR\$(128) at VARS-1, E_LINE-1, a valid CHECKSUM byte, or finds an erased section. Any program smaller than the REM statement will load; this includes programs with damage due to accidental POKE's which destroy the line structure. These don't run, but can be fixed using methods similar to the one used here. Immediate commands usually work, even when programs don't. Programs with erasure gaps and intact headers already load up to the point of the gap. You can save this much by finding the CHR\$(13) at the end of the last intact line, and poking a pair of CHR\$(128)'s after it. Then poke VARS to point to the first CHR\$(128) and enter CLEAR. (Examine it as machine code. You have already seen how.)

Rescuing the part of the program following an erasure gap can sometimes be done by splicing. A machine code program borrowing routines from the EXROM can read anything. If you had it, you wouldn't need any other technique.

Now you have diagnostic, and surgical tools for fixing damage. About plagiarism—Nobody in their right mind cares to copy GARBAGE. It must have SOME meaning.

If you really want and need security, there is one reliable way. Encrypt your code using a "public key" scheme. This is a method based on a long integer which is the product of two prime numbers. The "public key" is the long product. The "private key" is either of the primes. The largest binary integer usable with the 2068 is 32 bits. A CRA computer might break a 32 bit code in a few minutes, but why would anyone try?

Theft (or loss if you can't prove it) hurts just as much when the stolen item is useless to the thief as if it were jewels. Always...ALWAYS...keep backup copies, stored away from the cleaning lady, the jelly fingers, the compulsive button pushers.

What has been presented here is not intended to let you penetrate deep secrets for criminal purposes. It is for self-help when things get sticky. What bugs me is that computer manufacturers have advertised and sold security systems that my dog could open. Then they try to prosecute the poor guys who penetrate them. It is hard to see who is the bigger thief.

Sound and Music

SOUND: EXPLORING THE PSG

One of the things that caught my attention when I was deciding on which computer to buy three years ago was the fact that the 2068 had not one, but two means of producing sound. The "Spectrum Beep" and the sophisticated General Instrument PSG. Being that I am a musician of eight years, I wanted to make sure that the computer would be capable of offering high quality sound along with exceptional computational performance. Needless to say, I'm sold on the 2068.

The PSG is so complex that it offers many ways to create sound. Here are the choices: Computer regulated Amplitude and Frequency modulation (like the Atari) using the Beep to provide extra distortions with or without the noise source, using the envelope generator to control Amplitude modulation and frequency, modulation along with tone generation using the envelope generator without the tone generators and with or without the noise source, and lastly, any of the combinations from above. The major advantage that our chip has over the Atari and Commodore's 8 bit series of computers is the ability to create complex waveforms with less effort on the part of the CPU. Remember this, Atari-Tramiel decided to use the chip in their new 16 bit machines too.

Before we can efficiently use the chip we must gain an understanding of the relationship of time and the various elements of sound. For example, if we were to generate a ADSR waveform using the envelope generator we would have to know how long it takes for each phase to be completed so that we could set up the delay using the PAUSE command or (more protected) a FOR-NEXT loop.

We must gain an understanding of the various components of sound and how we can represent these components using the control registers of the sound chip.

One of the most important aspects of sound is frequency. In order to create music using the equally tempered scale, a table of values must be constructed to represent each semitone, as is with the BEEP facility. From the TIMEX technical manual, we can see that the frequency for the tone generator can be derived using the equation:

$$\text{frequency} = \frac{1.764}{16(256 \cdot CT + FT)}$$

CT = decimal val coarse tune
FT = decimal val fine tune

* The number in parens represents the Tone Period
This is not the same as the period of a waveform,
which is the inverse of the frequency.

By using this equation we can create an array to hold the coarse and Fine Tune Register values for the equally tempered scale.

Sound and Music

LIST

PROG:AY_ets!

```

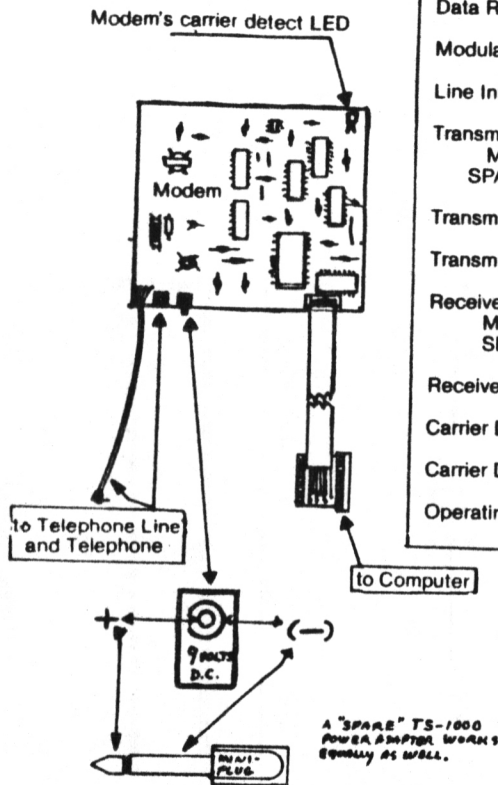
1 PAPER 6: INK 0: BORDER 6: B
RIGHT 0: FLASH 0: CLS : DIM v(96)
): DIM u(96): LET Z=-40: DIM n(96)
6)
10 LET x=1764000/16
20 LET b=27.5: LET s=2+(1/12)
30 FOR i=3 TO 98
40 LET a=(b+5+i)
70 LET a=x/a: LET c=INT (a/256)
)
80 LET f=INT (a-(c+256)+.5)
90 LET a=x/(c+256+f)
95 LET Z=Z+1: LET n(i-2)=Z: LET u(i-2)=f: LET v(i-2)=c
100 PRINT AT 0,5;"EQUALLY TEMPERED SCALE";AT 11,11; INK 2; BRIGHT 1; FLASH 1;"PLEASE WAIT": NEXT i
105 RESTORE : LET Z=1: CLS : PRINT AT 0,0; BRIGHT 1; PAPER 7;"OCTAVE NOTE FINE CRSE VAL#": LET L=0: FOR f=1 TO 96: LET L=L+1: FOR n=15 TO 0 STEP -2: SOUND 8,n;9,n;10,n: NEXT n: PAUSE 5: SOUND 8,15;9,15;10,15;7,56;2,u(f);3,v(f);4,u(f);5,v(f);1,v(f);0,u(f)
110 IF L>12 THEN LET Z=Z+1: LET L=1: RESTORE 180
115 READ N$: PRINT AT 1,3;" ";AT 1,3;Z;AT 1,9;" ";AT 1,9;N$;AT 1,15;" ";AT 1,15;U(F);AT 1,22;" ";AT 1,22;V(F);AT 1,28;" ";AT 1,28;F
120 PAUSE 5: NEXT F
180 DATA "C","C#","D","D#","E","F","F#","G","G#","A","A#","B"
199 PAPER 6: INK 0: BORDER 6: CLS : PRINT AT 2,1;"This program sets up two arrays to hold the coarse and fine tune values for the equally tempered scale." "Array-u holds the value for the fine tune register." "Array-v holds values for coarse tune reg."
200 PRINT " The complete 8-octave range is set. This will allow the pro-grammer to easily create music programs in a similar fashion to using the British BEEP but with the sophistication of our PSG."
201 PRINT " Simply GOTO 9999 to save the arrays";AT 20,0; BRIGHT 1; INK 4;"PSG ARRAY VAL OF 37=mid C = BEEP VAL 0 F 0"
300 STOP
9999 SAVE "PSG_ets" DATA v(): SAVE "PSG_ets#2" DATA u()

```


Telecommunications Modem Timex Sinclair 1000, 1500 & 2068 Personal Computers

SPECIFICATIONS

Data Format	Serial, binary, asynchronous	
Data Rate	0 to 300 bps, full duplex	
Modulation	Frequency shift-keyed (FSK)	
Line Interface	FCC Part 68 Direct Connect	
Transmit Frequency	ORIG	ANSR
MARK	1270 Hz	2225 Hz
SPACE	1070 Hz	2025 Hz
Transmit Frequency Accuracy	±0.01%	
Transmit Level	-12 dBm typical	
Receive Frequency	ORIG	ANSR
MARK	2225 Hz	1270 Hz
SPACE	2025 Hz	1070 Hz
Receive Frequency Tolerance	±0.05%	
Carrier Detect Threshold	-44 dBm typical	
Carrier Detect Delay	250 ms	
Operating Environment	0 to 40°C (32 to 110°F) 95% RH noncondensing	



Term II SOFTWARE MINI XMOD

ZERRA SYSTEMS INC. Curry Computer
78-06 Jamaica Ave. 5344 W. Banff Lane
Woodhaven, NY 11421 Glendale, AZ 85306

WHEN YOU ARE READY... Here is a list of Bulletin Board Systems with support for the TIMEX Sinclair user:

The Average Remote BBS (213) 325-0213 has a sub-board which was the first Timex sub-board, with U/L and D/L capabilities (for Timex), west of the Mississippi. It is segment 4 and is the "Original" TIME(X)CHANGE. There is a message base and lots of T/S2068 and T/S1002 files for U/L and D/L. Ed Grey is the SYSOP.

The TIME--(X)--CHANGE BBS (213) 329-3922 Operated by Dave Clifford, is a Timex dedicated BBS. There are many files and utilities online, 25Meg hard disk, 24 Hrs. Full support for all T/S computers online here. No TIME LIMIT.

Other BBS's with Timex sub-boards are:

Looking Glass BBS (213) 933-2204
Cal/BBS BBS (213) 589-0378
Zebra BBS (718) 296-2229
Omni-net BBS (718) 296-2385
Mini-Bin BBS (718) 837-2081
Shuttle Express BBS (206) 762-5141

Thanks to Dave C.

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225 Valley Place
MAMARONECK, NEW YORK 10543
(914) 698-7707

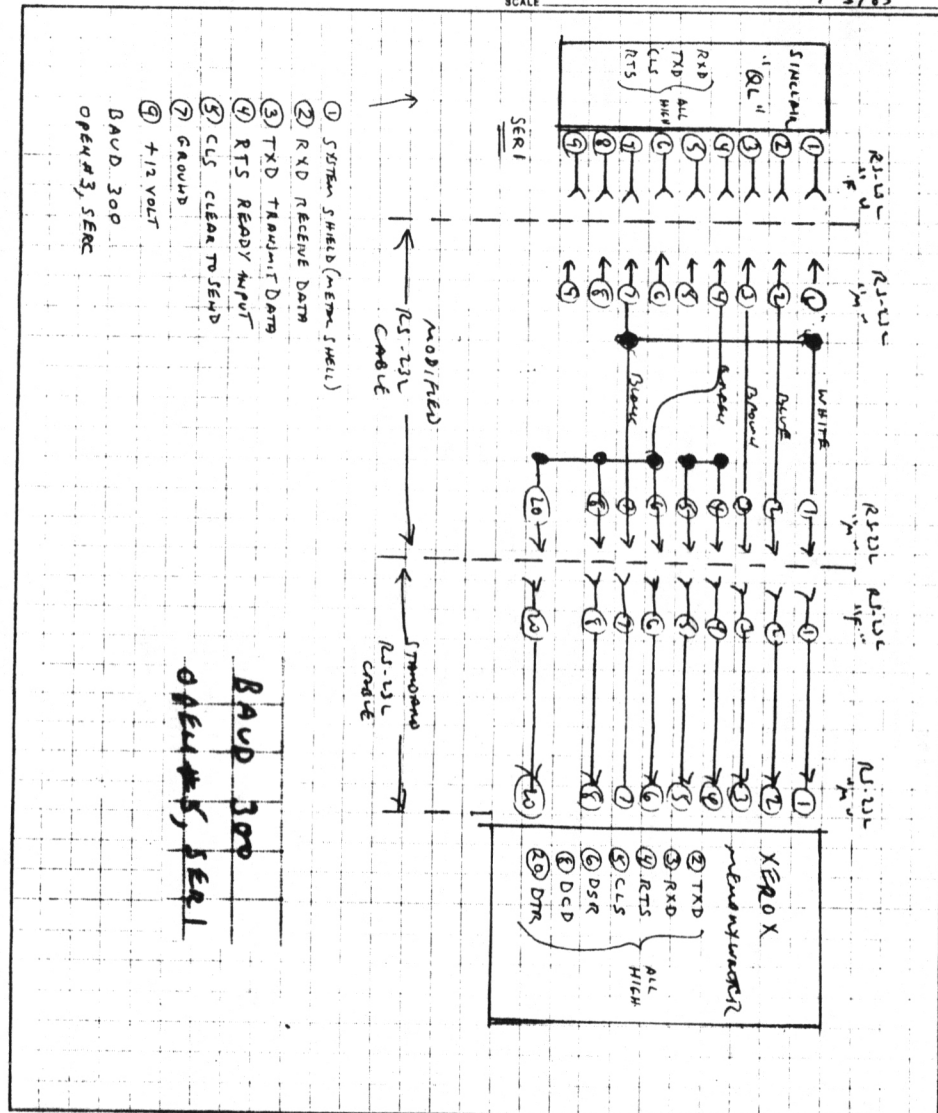
JOB SINCLAIR QL / RS-232C XEROX MEMORYWRITER

SHEET NO. OF 9

CALCULATED BY DATE

CHECKED BY DATE 12/18/85

SCALE 1-3/85



MEMORYWRITER OPTIONS FOR SINCLAIR QL WITH SER.1
OUTPUT(RS232) 12/26/85

- OPTION a=0 ECHO OFF
- OPTION b=0 CAPLOCK OFF
- OPTION c=1 LINE FEED ON
- OPTION d=1 LINE CONTROL ON
- OPTION e=1 POINT TO POINT ON
- OPTION f=3 BAUD RATE 300
- OPTION g=1 FULL DUPLEX
- OPTION h=2 PARITY-NONE
- OPTION i=1 AUTO LINE FEED ON
- OPTION j=0 STOP BITS 1
- OPTION k=0 ANSWER BACK OFF

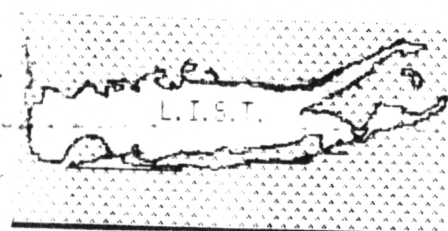
March
1986

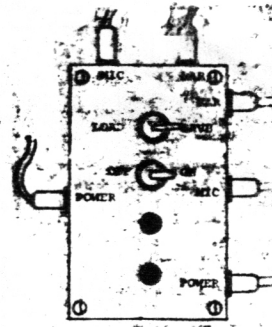
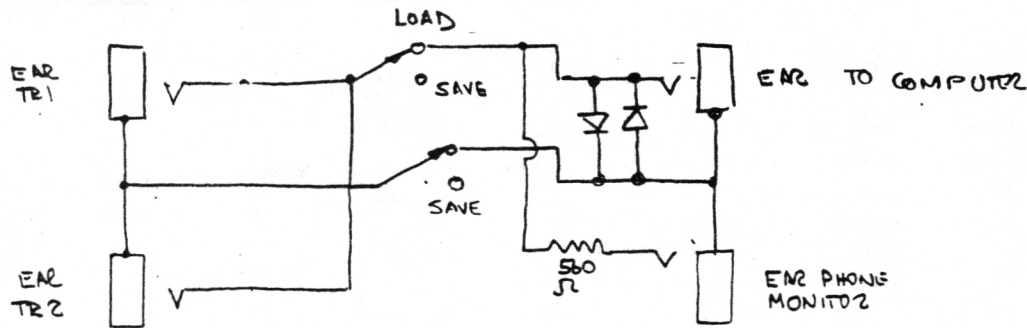
Hardware

9VDC Adapter

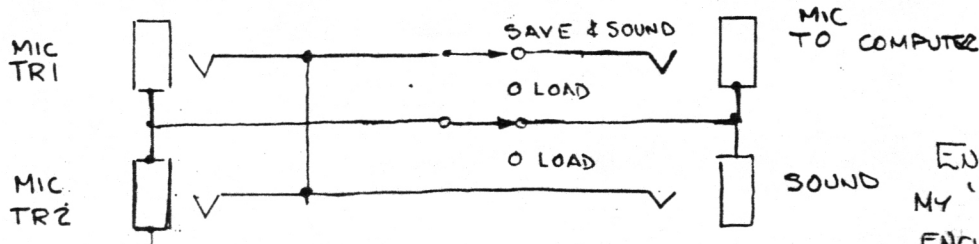
Converts 120VAC to 9VDC power required by many portable recorders, radios, video games and more. With one "barrel" and one mini plug. 500mA U.L. listed. 973-1851

There's a Radio Shack Store or Dealer Near You—





NOTE:
The SAVING LED can be mounted inside the case.

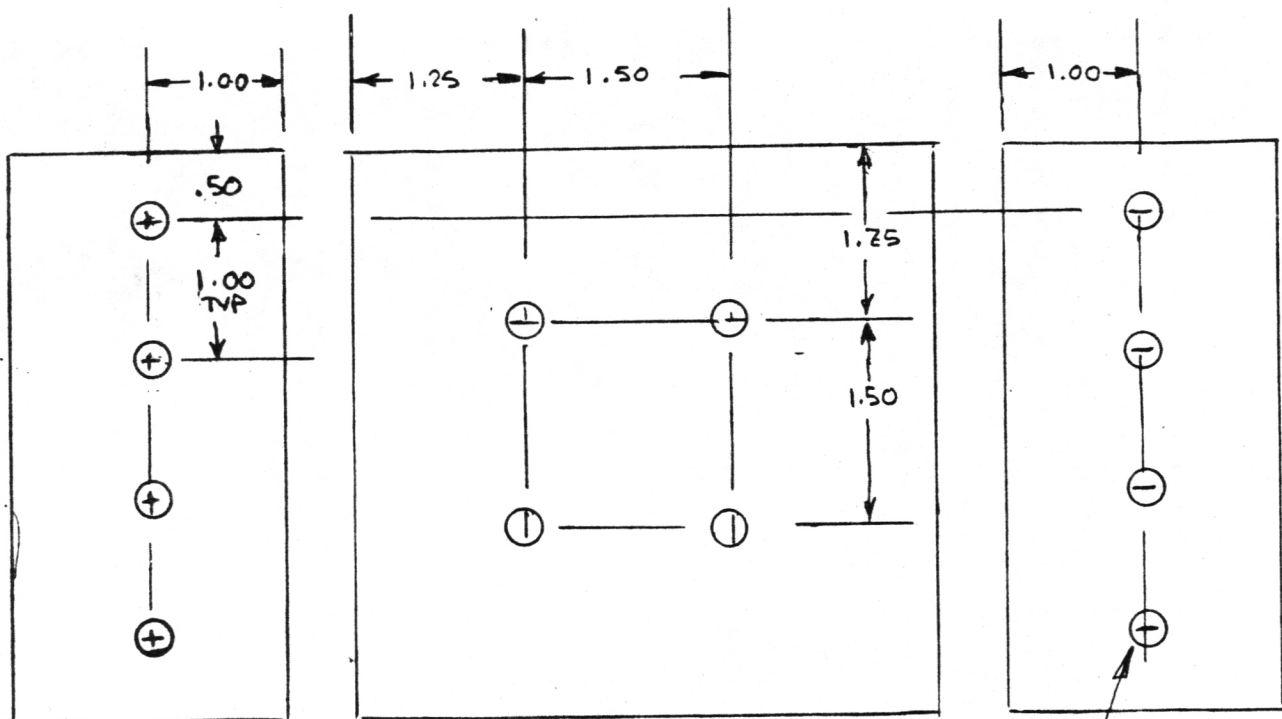


- 2 DPDT MINI SWITCHES
- 8 - 1/8 TH MIN JACKS
- 1 500 OHM RESISTOR
- 2 2V LEADS WITH RESISTORS

ENCLOSED IS 1500 FOR MY '8X DIES. ALSO ENCLOSED IS INFORMATION ON A LOADING AID.

I MODIFIED THIS AS SHOWN ON THE FIRST TWO SHEET FOR USE WITH 2 TAPE RECORDERS. I CAN NOW ALSO COPY A TAPE WITHOUT UNPLUGGING MY RECEIVER.

Bill Volk



Long Island Sinclair Timex Group

.250 DIA 12 PLACES

V. DEDICATED KEY FUNCTIONS WITH A COMMON KBD-LINE

There are 7 (seven) key functions which require one KBD-line to be connected to two different A-lines, refer to the Table of Figure 3 in Part 1 of this article series.

These functions are the

colon : requiring pin 2 to be connected to pins 13 and 11,
 semicolon ; requiring 2 to be connected to pins 13 and 10,
 equal sign = with pin 2 to be connected to pins 13 and 12,
 closing parenthesis), 2 to be connected to pins 13 and 9,
 "at" sign @ with pin 2 to be connected to pins 13 and 6,
 EDIT key, requiring 1 to be connected to pins 11 and 6,
 DELETE key, with pin 1 to be connected to pins 11 and 9.

The @ sign might only be useful as a dedicated key function for those of you who use the A&J microdrive. The remaining functions should be carefully chosen if you do not have a whole lot of spare keys available in your keyboard. DELETE would be a first choice, with : and ; next.

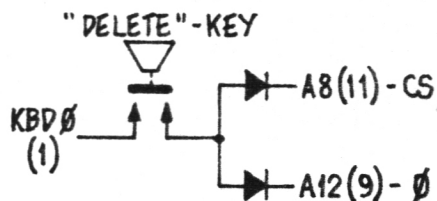


FIGURE 4

Allright, now how to effect this? Bearing in mind that current flows from KBD to A, it is quite simple, as Figure 4 shows. The diodes (silicon type, either 1N914 or 1N4148), are needed to prevent the A-lines from connecting together; we only want them to connect to the KBD-line.

I suggest that you DON'T BUY the so-called Radio Shack Archer Packs when you go shopping for diodes. These are very cheap (50 for less than \$2), but may not always be of reliable quality. Catalog item 276-1122 (10 for \$.99), on the other hand, is of quite acceptable quality.

VI. DEDICATED KEY FUNCTIONS WITH A COMMON A-LINE

Likewise, there are as we can again see in the Table of Figure 3, 3 (three) functions that require two different KBD-lines to be connected to one common A-line. These are the

period . which requires pins 2 and 3 to be connected to pin 13,
 comma , which requires pins 2 and 4 to be connected to pin 13,
 asterisk * which wants pins 2 and 5 to be connected to pin 13.

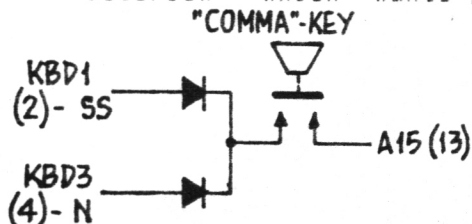


FIGURE 5

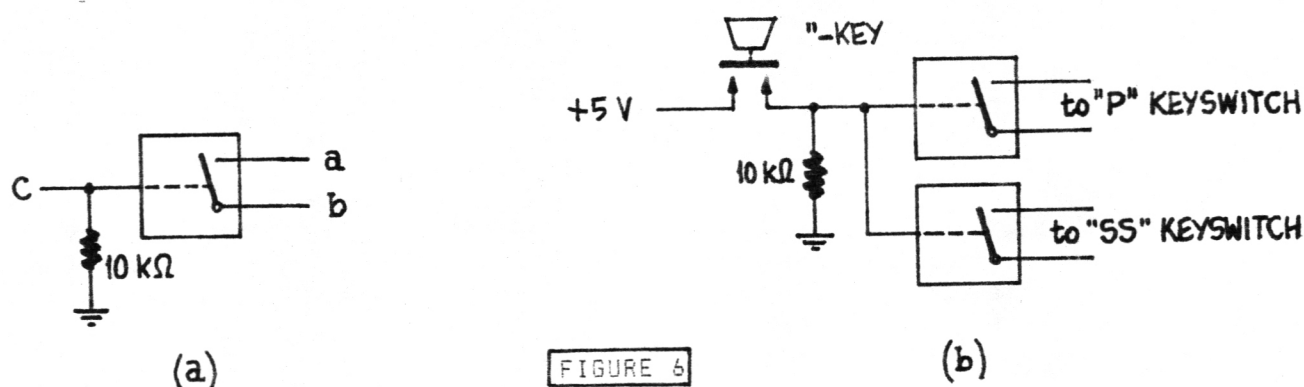
Again, we use diodes. Now to isolate the KBD-lines from each other, and Figure 5 shows the way to hook things up. The same observations as made in the preceding paragraph of course hold here too.

VII. THE REMAINING DEDICATED KEY FUNCTIONS

All of these require the switching of TWO independent line pairs. Of course, if our keyboard had DPST (double pole single throw) switches, this would be readily

possible to do. But if there are keyboards like that, I have never seen them. There is, however, an elegant electronic way of doing just what we want. Let me introduce you to the solid state switch, the so-called bilateral switch. I have adopted the symbol shown in the next few illustrations; I think that it shows the switching concept in terms which are more readily acceptable to most engineers and technicians. The official symbol is in my opinion confusing and meaningless.

Figure 6(a) shows the basic switch, which is NOT a mechanical switch but a semiconductor device. The 10 kilohm resistor keeps the control input (c) LOW; the resistance between points (a) and (b) is then extremely high, typically more than 1000 megohm. For all practical purposes, "contacts" (a) and (b) are OPEN.

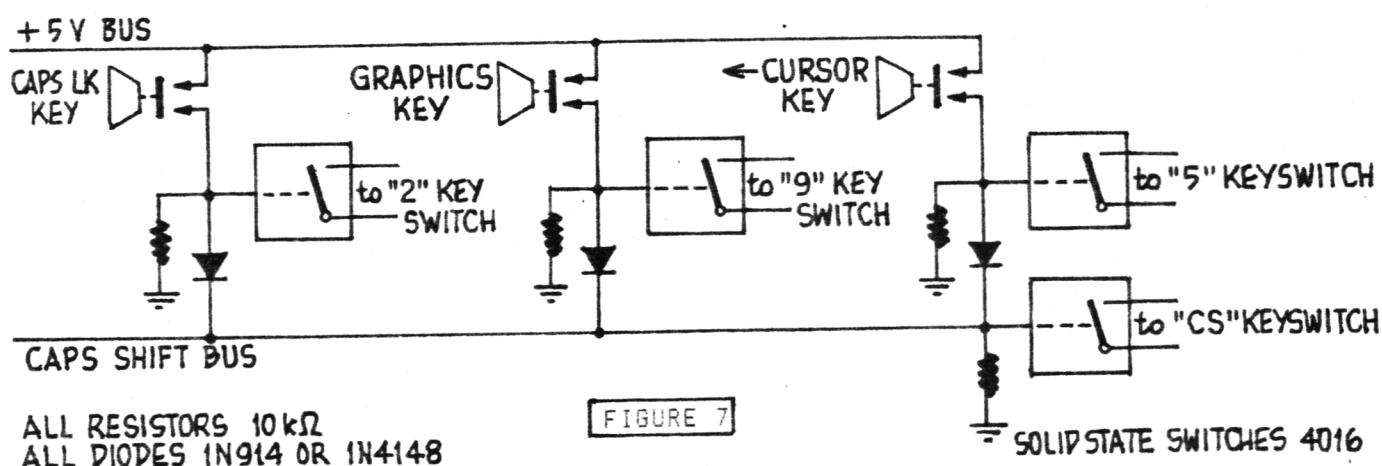


Should we, however, bring control point (c) HIGH, by for instance connecting it to +5 volts, the resistance between (a) and (b) would drop to a few hundred ohms, the exact value depending on some parameters, the supply voltage being the most influential parameter. As we have stated before, a few hundred ohm between a KBD-line and an A-line is sufficient to produce a character.

One such solid state switch would of course not do, but we can tie TWO together, as shown in Figure 6(b) and we would have a DPST switch!

The real beauty of these circuits, however, is shown in Figure 7. The dedicated functions require either a simultaneous Symbol or Caps Shift "contact closure" and we could therefore create a SS-bus and a CS-bus, each requiring only ONE solid state switch. The latter could then be activated by any one of the dedicated keys!

Figure 7 shows such a bus configuration for the CS function, with just THREE dedicated keys shown as examples. There is no limit to the number of solid state devices that you may use with one Shift Bus! Diodes are again used to isolate circuits; we do not want the activation of a bus to cause all dedicated keycircuits connected to that bus, to be activated as well.



VIII. EXTENDED MODE DEDICATED KEY FUNCTIONS

Having two Shift Buses, one for CS and one for SS, allows the logical choice of another dedicated key: the EXTENDED MODE. All that is needed is the key and two diodes, as shown in Figure 8. Pressing this EM-key puts the control lines of BOTH solid state switches HIGH, thusly creating the EM-function!

I went a step further with my surplus Key Tronic Corp. keyboard with 77 keys. I dedicated eleven keys in the extra top row to often used EM functions. These keys are immediately to the right of the dedicated EM key and are wired directly in parallel with selected standard keyswitches. For instance, such a key connected to the "A"-key would, after the EM-key had been pressed (making the E-cursor appear on screen), when pressed cause the "READ"-function to show! I selected for these special keys, such functions as READ, DATA, RESTORE, STR\$, CHR\$, INKEY\$, USR, LLIST, LPRINT, SQR and EXP. I found these to be extremely handy!

And what about the EM-functions that require an additional SS shift, after the E-cursor has appeared? Easy.

Yet another ramification of the idea; to thusly access often used commands, as for instance CAT, ATTR and others, used in disk drive operating systems. These are simply accessed with already EXISTING dedicated keys, which activate the SS function. For the two aforementioned functions, these would be the) and the = key! The keytops for these dedicated keys would simply show TWO symbols or legends, for instance = in black (on a white key) and ATTR in black on a blue background, which is the color of the EM-key on my KB.

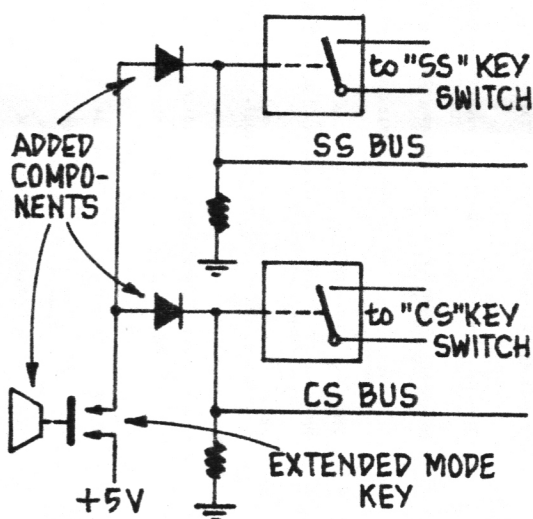


FIGURE 8

The diodes shown in the schematic are again needed for isolation; if the SS-bus is activated (pulled HIGH) by for instance pressing the dedicated ?-key, the CS-bus will not be affected, and vice versa.

The solid state switch comes packaged in a 16-pin DIP, four independent switches in a package. There are two types, the CD4016B and the CD4066B; their differences are of no concern in our application. Radio Shack sells the 4066 as their item 276-2466, current price \$1.19. +5 V is plenty to supply and drive these IC's and the current drain is so small, that you don't have to worry about overloading your computer's power supply.

In our next article in this series, I will give you some points to consider on keytops, as well as some matters of concern.

HOW ACCURATE IS YOUR COMPUTER ????

COMPUTE!'s Gazette, a magazine for Commodore computer users, recently had an irate letter to the Editor in it, part of which reads as follows:

The letter writer was ready to buy an Apple; but that computer would show the same erroneous answer. The IBM PC and the IBM AT both yield: -3.360001. Even in their "double precision mode", the answer is STILL not correct: -3.3600000000000003! AND OUR LOWLY TS 2068? IT SHOWS THE ONLY CORRECT ANSWER: - 3.36 !!!

I was talking to another I28 owner who said that it has a problem with simple subtraction:

PRINT 178.56-181.92
-3.35999997

---Cedric---

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Rear Edge-\$45 US

New Book "Build a Microcomputer Controlled Robot" by B.G. Taylor (\$13)
Also has Computer Continuum Boards & Control modules

New Book "200 Computer Programs in Basic for the TS 1000, ZX-81, TS 2068" - \$7.95 each

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BAN THE BOMB
AND
SPACE WEAPONS!

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Roseville, Mich.
48068

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11721-0438

Dear Paul,

I would like to ask you a question, if I may. What could be the causes of a program line changing once it is in the ADAM & run for a while? It seems to do it even more often after the program is listed. Also what could be done (other than the repair shop) to correct it?

A few months ago I asked you about a Spectrum (emulator) that did not function. The company that I bought it from had put the I.C. chip in the wrong way round. Why did they make a mistake like that? Good question. Don't mention which company. Should have noticed it right away. I'm not a little bit sure of you out there & don't know that much about electronics.

While I'm writing you this may-
be I can put in these piece of
space something that won't hurt
anyone's feelings. I don't know if
you own a TS 1000 or have Zebra Joy-
sticks for the TS 1000, they
will run perfectly on the same

Thank you. Harvey E. Manchester
Sincerely yours,

Copyright 1982
Beam Software

NOTE: The High Resolution Screen Copy will only work with an Epson or Epson Compatible Printer (Poland etc) with graphic capabilities. For others it will be necessary to obtain Tasmart or Aerco software. Otherwise send us a copy of your printer manual and we will make a version custom made for your printer.

Try to get this in the mail tomorrow. I received it Friday 11-22-85 and it sort of took me by surprise. I had started to get ready to wire up a TI keyboard for my collection of TS1000-ZX81's I've got the circuit board lose and the circuitry traces cut now I have laid the circuit board on a sheet of paper upside down (looking from the top it is) so it is as You see it from the bottom and I have marked thru the key solder tab holes so I can draw the wires on as they will be after it is all finished. I plan to use two non adjacent keys in series for a RESET key instead of unplugging or turning off the power as I have to do now. I also got 2 TI keyboards in the mail this week and yesterday I got an order from Zebra that had the ZX81 kit and a defunk ZX81 that had a bad keyboard. The kit had a good assembly manual the cords and the power supply. The power supply had a 6 foot power cord plus the regular cord with the standard power plug. There was no ZX81 User's Manual but they put in a copy of the book LEARNING TIMEX SINCLAIR BASIC by David A. Lien which I also had in my three foot shelf of Timex related books.

I saved the tapes by direct recording the tapes on my pair of T/S 2020 tape recorders, one I run off of the battery eliminator but the one that I save on I have to use battery power to get a load the computer (2068) will accept. And you can save while doing other things. To find out what was on the tape I typed in LOAD"big" and copied the titles given -pen-I haven't figured how to print it out. First time used the 2068 for about 6 months. Mostly because I don't have a color TV to use. My wife has a color TV but hell hath no fury like a woman in anger. But the ads for color tvs sure look tempting.

Good luck with the programs.

DONALD S. LAMBERT
3310 Clover Drive S.W.
Cedar Rapids, Iowa 52404

Dear Tom
During about the 4 day I was out
of town when the tape arrived as was one
person who had no telephone, because it is
so late. I'm just going to send the package
to you right away.

I do have a revision to add to the
minutes, but I don't want to hold
things up anymore. I'll send my contribution
statement to you as soon as I get the
chance.

Sorry I can't find the
key signature

EVERETT TALAUERA
TLALOC # 21
COL. TLALPACHA
C.P. 11570
MEXICO, D.F.

12/1/85

Paul Donnelly
L.I.S.T. GROUP
P.O. Box 438
Centerport, NY 11721-0438

Dear Paul,

This letter is written for three reasons.

First, there is the annual renewal of dues; enclosed is my cheque for \$15.

Second, there is Lloyd Painter's letter of 11/26/85, published in LISTing Jan.'86. My comments need only to be brief. Last time I extensively tested cassette tapes, was in 1967, three years after the Compact Cassette System was introduced to the world. At that time there were a little over one hundred brands and labels; I thoroughly tested 87 of them. I found the sensitivity to vary widely, up to 9 dB! The brands that I recommended in my article series, were - even then - among the top. It may be difficult to believe that now, in 1986, there might still be such an enormous spread in sensitivity! But maybe there is, I just don't know. Many of the labels and brands of 20 years ago are now gone, including most of the baddies. But since one can still find cassette tape prices fitting in a range of less than a dollar to almost \$4 or \$5, maybe there still is a number of undesirable brands around. Most tapes that I have tested recently, are however quite comparable in sensitivity. The problem Lloyd is reporting on, is most definitely a LEVEL problem. The ALC of his tape recorder simply corrected this, when he made a dub.

Third, about the new series I'm writing on KEYBOARDS. I recognize the fact that you, as the Editor of LISTING has the right (and the duty) to decide WHAT to publish and WHEN to do it. But I have to express my regret that you elected not to publish part I, which I had submitted for LISTing Jan.'86, as yet. You see, in part I, I mentioned a keyboard being sold now in the Radio Shack stores, warning that it would be very difficult to modify it for our needs (if possible at all). I know of at least one instance where a LIST member purchased such a board, only to find that it can not be used... Oh well, such is life. Not a great disaster, just a little unfortunate!

Best regards,

Cedric R. Bastiaans

Mt. Sinai, NY 11766

P.S. When will I get a chance to dub another Library Tape 4.6?

I wrote you about the mishap with my copy and sent you a large SASE to mail another copy to me. I guess that no copies came back from the mailloos yet, huh? As long as you don't forget my request!

crb

Cedric: Thanks for your further comments on Lloyd's question.

Sorry about the tape, but yes, we gave your groups copy to a new group and none of the other 16 tapes has been returned yet.

We ran out of room for your first keyboard article before the press deadline.

Do keep up the good work.

PD

DEAR PAUL DONNELLY:

I HAVEN'T HEARD FROM YOU SINCE YOU WROTE THAT YOU WOULD TO DO SOMETHING I WOULD LIKE. I HAVE BEEN SEARCHING IN EVERY LIST NEWSLETTER I RESEAUED FOR ANY COMMENT FROM YOU AND NOTHING. YOU HAVEN'T SAID ANYTHING ABOUT THE "CASSSETTE #1" I SENT YOU A LONG TIME AGO. I MUST SAY THAT I AM DISAPPOINTED FROM THE HELP RESEAUED FROM YOUR GROUP FOR THE TIME/SINCLAIR CAUSE IN MEXICO. I HAVE RESEAUED MUCH MORE HELP FROM SEVERAL LATINAMERICANS IN THE U.S.A. AND FROM A VERY NICE PERSON CALLED MARTIN CURLEY.

I HAVE NOT RESEAUED MORE THAN ONE OF LIST'S LIBRARY TAPE. I RESEAUED TAPE # 3.5 FOR THE T/S 2000 AND IT WAS GREAT!!! I SENT IT BACK WITH OUR GROUP TAPE LIBRARY "CASSSETTE # 1" WITHIN A WEEK HOPING THAT YOU WOULD SEND US ALL YOUR TAPE LIBRARY'S FOR BOTH THE T/S 1000 AS FOR THE T/S 2000. NOW, 7 MONTHS FROM THEN AND I HAVE NOT RESEAUED A "EVERETT, IS YOUR GROUP IN MEXICO STILL THERE AFTER THE 8.3 EARTHQUAKE ??? I'M SORRY PAUL, I AM JUST SORRY FOR THE VERY POOR COOPERATION BETWEEN L.I.S.T. AND A. U.T.S. DE MEXICO.

ABOUT YOUR NEWSLETTER, I COULD ONLY SAY "!!!!!!!!!!!!!!!!!!!!!!" AND I REALLY MEAN IT!!!! YOUR NEWSLETTER IS THE BEST I HAVE-SEEN ALLWAY FULL OF GREAT PROJECTS, NEWS, PROGRAMS, TIPS AND A LOT MORE THING. YOU ARE DOING A GREAT JOB PAUL, CONGRATULATIONS!!!

ENCLOSED IS OUR GROUP'S MOST RECENT NEWSLETTER WITHIN WE CALLED "INFO-A.U.T.S.". AS YOU CAN SEE, OUR NEWSLETTER IS VERY LATE BY A SHAKING REASON!!! I KNOW THAT MY SUBSCRIPTION TO LIST NEWSLETTER IS OVER SO I HOPE YOU COULD ACCEPT A NEWSLETTER EXCHANGE. RIGHT NOW WE EXCHANGE WITH SEVERAL GROUPS LIKE THE USER GROUP OF FORT WORTH TEXAS, CIRCUS NEWS, DEF T.S.U.A., COATS, HAMTON ROAD T.S.U.A. AND SEVERAL MORE AND WISH TO INCLUDE YOUR GROUP. THOU OUR KNOW IS NOT AS YOURS, WE LOVE OUR COMPUTERS, SO I HOPE YOU COULD ACCEPT.

IN ABOUT 2 WEEKS OUR NEXT NEWSLETTER WILL BE MAILED TO YOU AND ALSO OUR SECOND LIBRARY TAPE "CASSSETTE # 1.5" FOR THE T/S 2000, FOR YOUR'S TO KEEP!!! I DIDN'T LIKE COPYING A FULL 80 MIN TAPE OF PROGRAMS SO I WILL KEEP YOU FROM LOSING ABOUT A WEEK DOING THIS AND FROM SENDING IT BACK. COULD YOU DO THE SAME ???

IF YOU NEED HELP FOR YOUR NEWSLETTER LIKE REVIEWS, ARTICLES, TIPS OF WHAT EVER PLEASE LET ME KNOW!!! WE TOO, WISH TO HELP THE TIME/SINCLAIR CAUSE IN THE U.S.A. EVEN US, THE MEXICAN T/S ROOKIES CAN HELP IN SOME HOW OUR (LIKE YOU AMERICANS SAY) "ITTY BITTY ORPHAN COMPUTERS".

I HOPE THAT FROM NOW ON YOU COULD TREAT US AS A GROWING USER GROUP PLEADING FOR HELP AND NOT AS JUST ONE OF YOUR READERS!!!

"LET'S KEEP THE T/S FLAME ALIVE.....TOGETHER"

EVERETT TALAUERA

PRESIDENT OF A.U.T.S. DE MEXICO

P.S. WRITE BACK SOON!!!!!!!

E.T.

Greetings to your user group and fine newsletter. To answer your most recent letter:

What I thought you would like was a cassette full of programs with no need to return. Obviously, it didn't get to you. We also did not receive CASSSETTE #1. Problems with the Post Office or perhaps customs?

I hope not, as tape #1 is on its way to you, along with several other members contributions. We can replace the library tape, but the member programs would be hard to track. I don't know who will be mailing the tape to you, but to say that wherever it is, send the tapes by registered mail, if possible.

Sorry I misunderstood about your group. I had you listed as an individual member and while I recall your mentioning trying to form a group, I didn't recollect hearing that you were successful (quite successful, it seems).

Of course, we'd be happy to exchange newsletters and tapes. (Now what we need is a volunteer to translate some 36 pages of Spanish into English. Any takers?)

Oh yes, Martin Curley is a member of LIST. Thanks Martin for following up on Everett's request for help (as published in LISTing).

Keep up the good work with A.U.T.S. Martin He'll work out exchange tape coordination. Will be contacting you soon.

Everett Talauera
C.O. # 21
C.P. 11570
MEXICO, D.F.

LIST
21
C.P. 11570
MEXICO, D.F.

DEC. 29, 1985
P.O. BOX 2002
TEMPE, AZ.
85281

PAUL DONNELLY
% L.I.S.T.
P.O. BOX 438
CENTREPORT, N.Y.
11721-438

HELLO PAUL,
I WAS THE PERSON WHO CALLED YOU LONG
DISTANCE FROM ARIZONA CONCERNING
ARTIFICIAL INTELLIGENCE. TODAY I AM ALSO
WRITING TO MARTIN HELSGOTT AS WELL,
AS YOU SUGGESTED. I HAVE BEEN INTERES-
TED FOR SOME TIME IN BECOMING A MEMBER
OF YOUR USER GROUP. PLEASE TELL ME
WHAT BENEFITS I COULD EXPECT TO RECEIVE.
I WOULDN'T NORMALLY ASK THIS BUT I JOINED
THE TRIANGLE GROUP BACK IN JUNE AND
HAVE SINCE RECEIVED PRECISELY 1 (ONE)
ISSUE OF THE NEWSLETTER.... THE
FEBRUARY ISSUE. THAT WAS IT.

I ALSO ASKED YOU IF YOU'D BE KIND ENOUGH TO ADD TO MY USER GROUP LIST IF AT ALL POSSIBLE. YOU SAID YOU WOULD. I ENCLOSE MY LIST AND A SELF-ADDRESSED- STAMPED-ENVELOPE. I HOPE YOU ALL HAD AS GOOD A HOLIDAY AS WE HAD HERE.

KEEP ON TIMEXING!

B. L. Sack

PETE FISCHER

P.S. I WILL SEND YOU UPDATED VERSIONS OF THIS LIST AS I DEVELOP THEM.

Again, we at LIST are delighted to have your contributions. Thanks.

PD

5 January 1960
 P.O. Box 7200
 Little Rock, Ark. 72201

L. I. S. T. GROUP
P O Box 438
CenterPort, NY 11721-0438

(near LIST

Thank you for the newsletter. I really appreciate it.
I have, for me, sad news to report. I have found it
necessary to shut down Hinko. With our situation, this again
however, be a forced economy for L.L.O.I.

I have some concerns left over, and while they are troubling me I would prefer to just get rid of the remnants of the operation. I would, and would, be able to selling my remaining stock to L.L.B.F. at or below cost.

The following is a list of the items still in stock
 2 each EMU-1 microcomputers for 1985
 1 there are the original versions.

4 and the following 1 is also possible:

* each [4xPCI] = 60 MIOBT
 * each [PCI+PCI] = 80 MIOBT
 * each [PCI+PCI] = 80 MIOBT
 * each [PCI+PCI] = 80 MIOBT

and these specimens were evaluated in combination

- 2 each LOT by HBS&T
- 3 each Countries of the World by Hewson
- 4 each QUEST by Hewson
- 5 each Nightlife by Hewson
- 5 each s to Skate Wars by Hewson
- 1 each Backgammon by Hewson
- 6 each Spectral Prints by Hewson

4. *conspicillata*

4 each Pilot position on the left side of the runway

Enclosed is a postcard. Make me an effort to let the
whining thing go for real. Please do what ever is worth it.

I will hold you under till I receive your order, if it is at all adequate. The medium I want is a good one. I receive the check in money order, send the check with your order, it is safe for both things. I'll return the check if I don't receive your order, so you will see I am not so little a kid. Maxwell shows otherwise. He acts as a boy with a girl.

It goes without saying that you are a very hard worker & a very good person. I am sure you will be a great success in the future. I am sure you will be a great success in the future. I am sure you will be a great success in the future.

1971-1972

Address: 10111 1st Ave. S.W.
 Title: Chief Engineer
 Location: Burien
 Employer: Puget Sound
 Employment Dates: 1974-1978
 Full/Part: Full Time
 Reason for Leaving: Retirement
 Estimated Salary: \$12,000



HAWG WILD Software

Rich. - I have never seen a full size printer with a 2068 interface, though Alphacom may have made some. You need a printer interface, either serial or parallel, to suit the kind of printer you'd like to have.

First decide on a letter quality or dot matrix type printer. LQ is good for correspondence and some listings and has output that looks like a typewriter. Dot matrix printers have an output that looks like your Timex printer and many (not all) can reproduce screen graphics, if you have the right software. Vendors include:

Zebra Systems - 78-06 Jamaica Ave., Woodhaven N.Y. 11421
EMC (English Micro Connection) 15 Kilbourn Ct., Newport, RI 02840
Rames International - 17620 26 Mile Rd., Washington, MI 48094
Byte Back - Rt 4 Box 54, Leesville, S.C. 29070
Aerco - Box 18093, Austin, Texas 78790-8093

The Gorilla Banana was selling for as little as \$100 from DAK industries and, with an RS 232 interface, the Brother EP-44 Typewriters/Printer is now selling for as little as \$119. The lowest cost alternatives is to buy a surplus Gavilan printer from American Technology (\$20) and build your own Centronic (parallel) interface, as shown in back issues of LISTING and other publications. You may have to write your own software, though.

As to your second question, I'm not sure. What you describe doesn't seem possible unless you inadvertently replaced the Timex exrom with the home rom. Then, I think the speccy ROM would still be working. By extra commands, I assume you mean STICK, FREE, SOUND, etc. Which copyright message comes up when you switch on? Hope this helps!

Very truly,

PD

January 15, 1986

Johnson City, TN 37605-0032

About to forget to renew? Here's check for another year \$15.00

I guess you've heard of Oliger's Disc System? I have gotten one and it really works well! I bought some Canon DSDD drives on surplus several months before Oliger finished his I/O and they work well with it. 2 sec loading time.

Do you still have spectrum ROMs? Price?

Harold A. Komer

Neil: - Gooddeal! Yes! I have 3 ROM's left. \$10.00 each plus \$1.00 shipping & Handling.

RD

R.S. Hello to Idaho!

January 30th, 1986

E. Andrew Vreugden
Vice-president; ATBU Home Computer User's Group
4706 Langley Avenue
Whiteland, Ohio 43213
614/894-3136

L.I.B.T. Newsletter
PO Box 438
Centerport, New York 11721

Zary J. South
Tucson, Arizona

January 11, 1986

Paul Donnelly
LIST Group
P.O. Box 438
Centerport, N.Y. 11721-0438

Dear Paul:

I really enjoy your newsletters and recently received your library tape 3.5. The programs are all useful and I am looking forward to more. I will contribute what I can.

If any of your membership has Taspint for the 2068 and a Prowriter printer I have the necessary "fix" that will make Taspint work. I can either contribute it to the library or have you publish my address so that anyone can write. I will leave it up to you.

Please call on me if there is anything I can do for the group.

Best regards,

Zary: Please do contribute your fix to the library. We'd like to publish it in LIST too, if you'll send a hard copy. Thanks for your offer.

Eric Vreugden
Midwest T/S Computerfest Club Coordinator
EAT/HRT

LIST
BOX 438
CENTERPORT, N.Y. 11721-0431

W.J. Pedersen

Dear W.J.

Thank you again for your excellent contributions to LISTing. We'll be publishing more of your material in up coming LISTing's and will try to continue sending "authors" copies of those issues.

I'd also like to add your "TTT" program to our tape library. The library, as you have probably learned, is not public domain, but I'm sure our members would be happy to share one of the tapes with you, as well.

Your second article on BEU's has caused considerable commotion and hot discussion among the hardware types. They are eagerly awaiting Part III. (Parts II & III will be published in upcoming issues of LISTing).

Again, thanks for your efforts and please keep us posted.

Very truly yours,

PD

Dear David,

I mailed tape #3.5 the day after I received it. Lotsa good stuff in store for ya!

On the Sony HF60:
Program: printhead
Bytes: bold
Program: big letters

The above was on the tape when I received it.

I added the following:

PARAKEET

2068 ART

Space-Age CHRS

TOKEN

3D-WORDS

(LEADS IN AT 32768)

768 Bytes long

POKE 23607,127

INITIATE

LIST,
GENTLEMEN.

ENCLOSED IS CHECK FOR \$15.00 FOR ONE YEAR SUBSCRIPTION TO "LIST."

I WOULD ALSO LIKE TO REPEAT MY REQUEST FOR EXCLUSION OF THE CIRCULATING TAPE LIBRARY. FOR SOME REASON I'VE BEEN INCLUDED AND I PREFER NOT TO BE JUST YET, I'LL DROP YOU A LINE IN THE FUTURE WHEN I WISH TO BE INCLUDED.

THANKS AGAIN
YOU'RE TERRIFIC

JERRY HAACK
FARMINGDALE, N.Y.

OK, PD.

John L. L...
177 Main St.
Beverly Hills, CA 91702

Dear Jeff,

First, I'd like to thank you. Some months ago you sent me a copy of N. Pashtoon ROM atlas for the 2068. I've found it helpful.

Second, some comments on the tape library.

Loading & saving each program from the library tape is time consuming, especially if you stop to sample the program. After spending 3 evenings saving Side 1 of Tape 4.6, I tried the program: Tape2 and Tape2 tape to make a copy of side 2.

Neither program worked. I used Panasonic RQ 2736 Slimline to load and Radio Shack CTR 57 to save to a Radio Shack low noise tape. The copy won't load - the tape header is read in only a few cases and none of the programs load.

Any suggestions from LIST would be appreciated.

John L.: The quickest way to make your copy of our library tape is to use a Radio Shack alternator. These are available in 40 and 500B models. The 500B version is intended for use between two cassette decks. Either model sells for around \$2.00. Older versions had a red body and looked like an adapter plug. Newer models have a cord. You hook the alternator up between EAS on the "play" machine (at .75 to .9 of volume) and MIC on the recording or "copy" machine.

Did you try your machines the other way around? Remember head alignment is critical.

See also Stan Nagrod's letter.

PD

Ian F. Robertson
Wellington, Ontario

LIST GROUP
P.O. Box 438
CENTERPORT
NY 11721-0438
U.S.A.

Attention: Paul Donnelly

January 9, 1986

Dear Paul,

Enclosed please find my Canada Post money order #5166076959, in the amount of \$15.00 (US). This will renew my membership for one more year.

It is a pleasure to belong to LIST and to receive the benefits of same. The one continuing benefit (and the one I enjoy the most) is that your newsletter comes out every month, almost on a deadline. What a challenge for your group and what a pleasure for those of us on the receiving end.

Keep those "loaded with info" newsletters coming!

Sincerely,

Ian F. Robertson

Ian F. Robertson
CompuServe 72167,3401
Fido NET 111/NODE 608

AW Shucks!

U.S.T. is GREAT!
NEWSY! INFORMATIVE!

THANKS!

THANKS!

Wish I was capable
of contributing
of course

OUR MANLINE

du

ATTENTION

H.

LISTing Policy:

1986

Annual Dues.....\$15.00 Issue Price \$1.50 (includes P&P) - Double Issues \$3.00

One "Sample" copy sent upon receipt of large SASE.

Copies provided on exchange basis with other bona fide user groups.

L.I.S.T.ing is published monthly by LIST (Long Island Sinclair Timex) Group,
a non-for-profit users group.

NOTE: PARTIAL YEAR MEMBERSHIPS AVAILABLE

Normal membership year is Feb. through Jan. at cost of \$15.00 (US)
By keeping as many members as possible on that basis, we keep our
costs and chances of error down.

If you wish to begin subscribing later in the year, please sign
up for the end of this year and all of next.

We will accept partial years or different subscription runs,
on a limited basis (particularly from members outside the U.S.)
But, please be aware that, in addition to possible rate increases,
your "account" must be handled "by hand" and errors may occur.
International (ex Canada) subscribers will receive as many
issues as we can afford to mail

POLICY OF CONTRIBUTED MATERIAL:

We are always looking for interesting articles, programs, reviews etc., to
keep our members informed and entertained. Articles submitted for publishing
are printed on the following basis.

- 1) You, the writer, maintain the full copyright and can
resell, lend or give away your work, as you wish.
- 2) We are granted the right to publish your material,
in the original issue in which it appears. Reprints
(e.g., to supply orders for back issues) will in-
clude your material as a part of its original issue.
We are not allowed to sell your material in any
other way, without your express written consent.

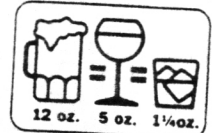
We can't (for now) pay you for your material, but
you will receive a copy of the issue in which it
is published, even if you're not a member. You
may get more than one issue and you will definitely
earn the respect and appreciation by your grateful
peers.

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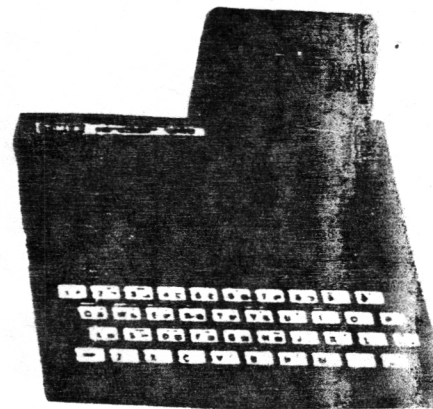
Please note our new address - PO BOX 438, Centerport, N.Y. 11721-0438
Mail sent to the old address must be forwarded there and will take
longer to reach us.

All are equal
in alcohol content.



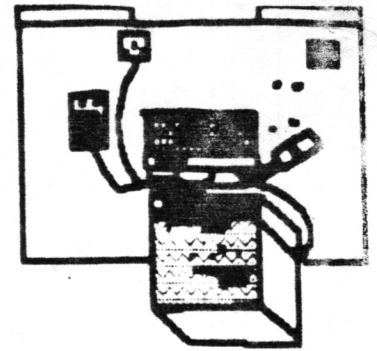
Beer: 4.5% by volume; Wine: 11% by volume
Liquor: 80 proof or 40% by volume.

A public service bulletin from Joseph E. Seagram & Sons, Inc.



LIST

LIST



Long Island
Sincere Times
Grouper
Huntington, NY
Library
2 PM

Please check your mailing label. Above your last name you will see the month and year in which you will receive your next issue of LISTING (LIST) Newsletter. If this number does not agree with your records please let us know

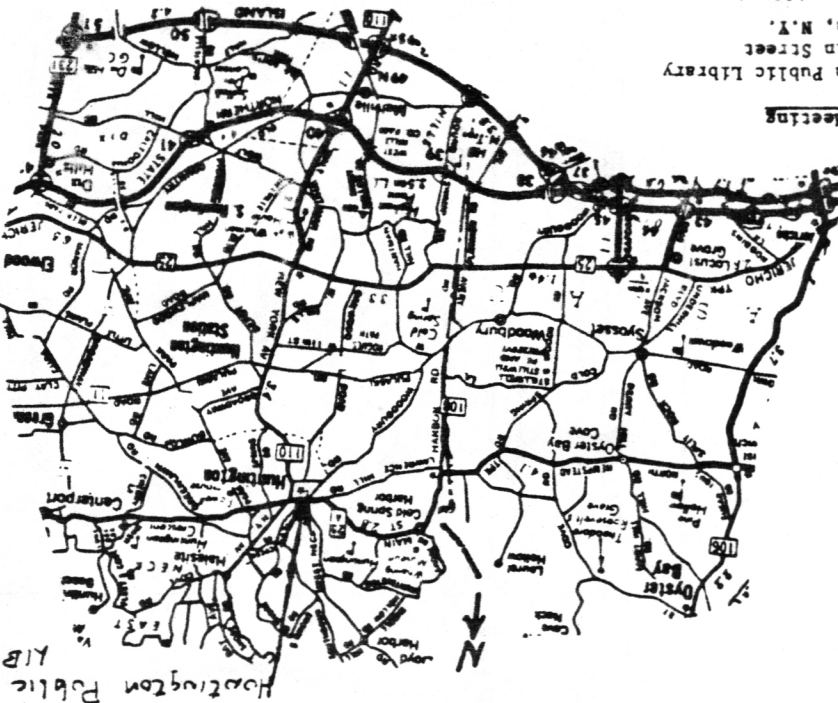
SUBSCRIPTION NOTICE



L.I.E. or M.S.P. to Rt 110 N.
Follow 110 across Rt 25 to Rt 25A
Go left on 25A. Library is 4 blocks
down on the left

at 2:PM

March 16, 1986 (Sunday)
Huntington, N.Y.
Rt 25A Main Street
Huntington Public Library
March Meeting



Huntington Public Library

LIST
P.O. BOX 438
CENTERPORT, N.Y. 11721-0438

TO:

THIS COULD BE YOUR LAST ISSUE!

Most members (over 90%) are on a Feb. to Jan. schedule. Please double check the membership/subscription expiration date printed on your mailing label

LISTING